

REMARKS

This Application has been carefully reviewed in light of the Office Action mailed May 17, 2005. At the time of the Office Action, Claims 7-13 were pending in this Application. Claims 7-13 were rejected. Claims 7-13 have been amended to further define various features of Applicants' invention. New Claims 14-25 have been added. Applicants respectfully request reconsideration and favorable action in this case.

Rejections under 35 U.S.C. § 112

Claims 12 and 13 were rejected by the Examiner under 35 U.S.C. §112, second paragraph, as being indefinite and failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants have amended Claims 12 and 13 to overcome these rejections and respectfully request full allowance of Claims 12 and 13 as amended.

Rejections under 35 U.S.C. §103

The Examiner rejected "Claims 7, 2, 5 and 6" are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 5,931,160 issued to Don Gilmore et al. ("*Gilmore*") in view of U.S. Patent 6,584,973 issued to James W. Biondi et al. ("*Biondi*"). However, Applicants believe the Examiner intended to reject Claims 7-9 (but mistakenly wrote "Claims 7, 2, 5 and 6"), and will treat such rejection accordingly.

In addition, Claims 10-13 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. *Gilmore* in view of *Biondi* as applied to Claim 7, and further in view of U.S. Patent 5,752,509 issued to Burkhard Lachmann et al. ("*Lachmann*").

Applicants respectfully traverse and submit the cited art combinations, even if proper, which Applicants do not concede, do not render the claimed embodiment of the invention obvious.

Applicants submit that *Gilmore* in view of *Biondi* and/or *Lachmann* fails to teach or suggest all of the limitations of amended Claims 7-13. For example, amended Claim 7 recites:

7. In a system for programming a respirator for ventilating a patient, the system including a programmable controller responsive to selected ventilation parameters for controlling the respirator to ventilate the patient and for storing a plurality of ventilation parameters, a display for displaying a plurality of implemented ventilation parameters currently used by the controller to control the respirator and a plurality of proposed but not implemented ventilation parameters, and an input system cooperating with the controller and the display for selecting one of the proposed but not implemented ventilation parameters from the plurality of proposed but not implemented ventilation parameters, the improvement comprising:

said display including a graphical representation of the effect of the proposed but not implemented ventilation parameters on a breath cycle having a duration;

wherein said graphical representation includes a time scale associated with the breath cycle, an inspiration bar having a length corresponding to a proposed inspiration time, an expiration bar having a length corresponding to a proposed expiration time, a first numerical indicator indicating the proposed inspiration time, a second numerical indicator indicating the proposed inspiration time, and a third numerical indicator indicating the duration of the complete breath cycle, wherein at least the first and second numerical indicators are separate from the time scale.

None of *Gilmore*, *Biondi*, or *Lachmann*, whether considered alone or in combination, teach or suggest at least the following limitations of amended Claim 7:

- a “display including a graphical representation of the effect of the proposed but not implemented ventilation parameters on a breath cycle having a duration, said graphical representation including a time scale associated with the breath cycle, an inspiration bar having a length corresponding to a proposed inspiration time, an expiration bar having a length corresponding to a proposed expiration time, a first numerical indicator indicating the proposed inspiration time, a second numerical indicator indicating the proposed inspiration time, and a third numerical indicator indicating the duration of the complete breath cycle, wherein at least the first and second numerical indicators are separate from the time scale.” (emphasis added).

Gilmore: The Examiner acknowledges that “Gilmore does not explicitly disclose the display including a graphical representation of the effect of the proposed ventilation parameters on the breath cycle.” (Office Action, page 3). Thus, *Gilmore* cannot teach the limitations of amended Claim 7 recited above, which regard a “display including a graphical representation of the effect of the proposed but not implemented ventilation parameters on a breath cycle having a duration.”

Biondi: The Examiner asserts that “Biondi teaches a system for programming a respirator for ventilating a patient, the system including a graphical representation of the effect of the proposed ventilation parameters on the breath cycle (figs. 5, 7-10, 13 and 16; col. 6, lines 1-63).” (Office Action, Pages 3-4).

However, col. 6, lines 1-63 of *Biondi*, which corresponds to Figure 5, discusses *implemented, not proposed*, ventilation parameters. For example, the cited passage states:

Now referring also to FIG. 5 a detailed functional block diagram of the ventilator control system 10 is depicted. As shown, the clinician 16 manipulates a control setting slider 34 to change or set one or more breath parameters. A change alert panel 36 on the display 24 informs the clinician 16 of the process, from input to implementation, to assure him that his input information is being processed properly. . . . The embedded controller 14 implements 48 the validated breath control structure 48 using a breath control algorithm 50 and provides signals to the pneumatic system 41 for simultaneously changing one or more control settings at the appropriate time. . . .

The ventilator control system 10 provides two independent feedback paths to assure the clinician 16 that his setting change has been properly implemented. . . . The display controller 12 also displays 60 a series of measurements (e.g., peak airway pressure, peak airway flow, and PEEP) from the waveform data both numerically and graphically. Second, the display controller 12 displays 54 the continuous waveforms on the display 24. The waveforms are derived 56 from raw data from the sensors 19, returned from the embedded controller 14 and passed directly to the display 24.

In addition, the displays shown in Figures 7-8 of *Biondi* include a graphical representation of the effect of *implemented* ventilation parameters on a breath cycle -- see waveforms 74 and 76. The displays shown in Figures 7-8 do not include a graphical representation of the effect of *proposed, but not implemented*, ventilation parameters.

Figure 13 is the only portion of *Biondi* cited by the Examiner that arguably includes a graphical representation of the effect of proposed, but not implemented, ventilation parameters -- see waveforms 74' and 76' and col. 15, line 54 to col. 16, line 45. However, such graphical representations (waveforms 74' and 76') do not include any of the following elements recited in amended Claim 7:

- an inspiration bar having a length corresponding to a proposed inspiration time,
- an expiration bar having a length corresponding to a proposed expiration time,
- a first numerical indicator indicating the proposed inspiration time, a second numerical indicator indicating the proposed expiration time, and a third numerical indicator indicating the duration of the complete breath cycle, wherein at least the first and second numerical indicators are separate from the time scale.

Thus, *Biondi* cannot teach the limitations of amended Claim 7 recited above.

Lachmann: The Examiner asserts that “Lachmann teaches a ventilator system for ventilating a patient (Abstract) wherein inspiration and expiration indicators are in the form of bars (figs. 6, 9 and 11; col. 10, lines 45-47).” (Office Action, Page __)

Figures 6, 9, and 11 of *Lachmann* illustrate charts of pressure vs. time for gas provided to a patient by a ventilator. However, *Lachmann* does not disclose that such charts are actually displayed on a display -- instead, they merely represent mathematical functions used by the ventilator system of *Lachmann*. In addition, even assuming for the sake of argument that the charts shown in Figures 6, 9, and 11 illustrate “an inspiration bar having a length corresponding to a proposed inspiration time” and “an expiration bar having a length corresponding to a proposed expiration time” (which Applicants do not concede), the charts shown in Figures 6, 9, and 11 do not illustrate any of the following elements recited in amended Claim 7:

- a first numerical indicator indicating the proposed inspiration time,
- a second numerical indicator indicating the proposed expiration time,
- a third numerical indicator indicating the duration of the complete breath cycle,
- wherein at least the first and second numerical indicators are separate from the time scale.

Thus, *Lachmann* cannot teach the limitations of amended Claim 7 recited above.

For at least these reasons, *Gilmore*, *Biondi*, or *Lachmann* clearly fail to teach or suggest all of the limitations of amended Claim 7. Thus, Applicants respectfully request reconsideration and allowance of amended independent Claim 7, as well as Claims 8-13 that depend from Claim 1.

New Claims 14-25 are Allowable

Applicants submit that new Claims 14-25 are allowable over the cited art for reasons analogous to those discussed above regarding Claim 7.

For example, regarding independent Claim 14, none of *Gilmore*, *Biondi*, or *Lachmann*, whether considered alone or in combination, teach or suggest at least the following limitations:

- “a display operable to display a graphical representation of the effect of one or more proposed but not implemented ventilation parameters on a breath cycle having a duration, the graphical representation including a time scale associated with the breath cycle, an inspiration bar having a length corresponding to a proposed inspiration time, an expiration bar having a length corresponding to a proposed expiration time, a first numerical indicator indicating the proposed inspiration time, a second numerical indicator indicating the proposed inspiration time, and a third numerical indicator indicating the duration of the complete breath cycle, wherein at least the first and second numerical indicators are separate from the time scale.” (emphasis added).

As another example, regarding independent Claim 20, none of *Gilmore*, *Biondi*, or *Lachmann*, whether considered alone or in combination, teach or suggest at least the following limitations:

- computer instructions operable to “display a graphical representation of the effect of one or more proposed but not implemented ventilation parameters on a breath cycle having a duration, the graphical representation including a time scale associated with the breath cycle, an inspiration bar having a length corresponding to a proposed inspiration time, an expiration bar having a length corresponding to a proposed expiration time, a first numerical indicator indicating the proposed inspiration time, a second numerical indicator indicating the proposed inspiration time, and a third

numerical indicator indicating the duration of the complete breath cycle, wherein at least the first and second numerical indicators are separate from the time scale.” (emphasis added).

For at least these reasons, Applicants respectfully request reconsideration and allowance of new independent Claims 14 and 20, as well as Claims 15-19 and 21-25 that depend therefrom.

Change of Correspondence Address

Applicants respectfully request that all papers pertaining to the above-captioned patent application be directed to Customer No. **31625** and all telephone calls should be directed to Eric M. Grabski at 512.322.2689.

CONCLUSION

Applicants have now made an earnest effort to place this case in condition for allowance in light of the amendments and remarks set forth above. Applicants respectfully request reconsideration of the claims as amended.

Applicants enclose a Petition for Extension of Time for three months and a check in the amount of \$1,020.00 for the extension fee.

Applicants believe there are no additional fees due at this time, however, the Commissioner is hereby authorized to charge any fees necessary or credit any overpayment to Deposit Account No. 50-2148 of Baker Botts L.L.P.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicants' attorney at 512.322.2689.

Respectfully submitted,
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